



# ARIZONA PROJECT WET TUCSON AMA




COLLEGE OF AGRICULTURE & LIFE SCIENCES  
COOPERATIVE EXTENSION

**WATER RESOURCES  
RESEARCH CENTER**



## OVERVIEW OF APW-IGA

- **MULTI-DAY TEACHER ENGINEERING ACADEMY**
  - **EXPANSION OF EXISTING STUDENT OUTREACH PROGRAMS**
  - **EQUIPMENT LOAN PROGRAM**
- 

# Tucson AMA - IGA 2018



## Teacher Academies

20 Teachers



135% Gain in  
Understanding  
CAP Operations

Instruct  
1,407  
Students



Instruct  
180  
Students



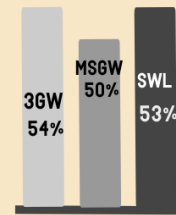
5  
Classrooms

Water Quality  
Testing

Students



## Direct Instruction



### Student Learning Gains

3GW: 3rd Grade Groundwater  
MSGW: Middle School Groundwater  
SWL: Sweetwater Festival

2,143  
Students  
Instructed



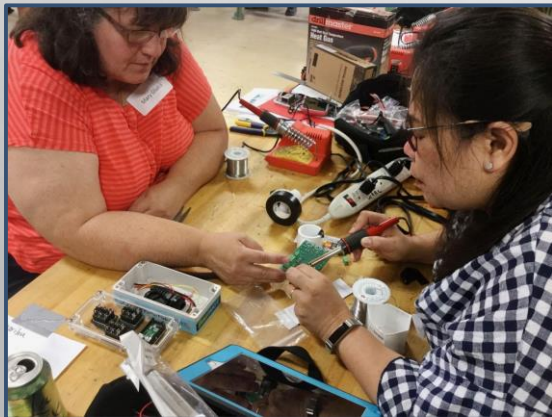
215  
Students  
Performed  
Water Audits



601,053 gal/yr  
Projected Water  
Savings

Student-Driven  
Projects

# UNDERWATER ROBOTICS & ENGINEERING DESIGN ACADEMY





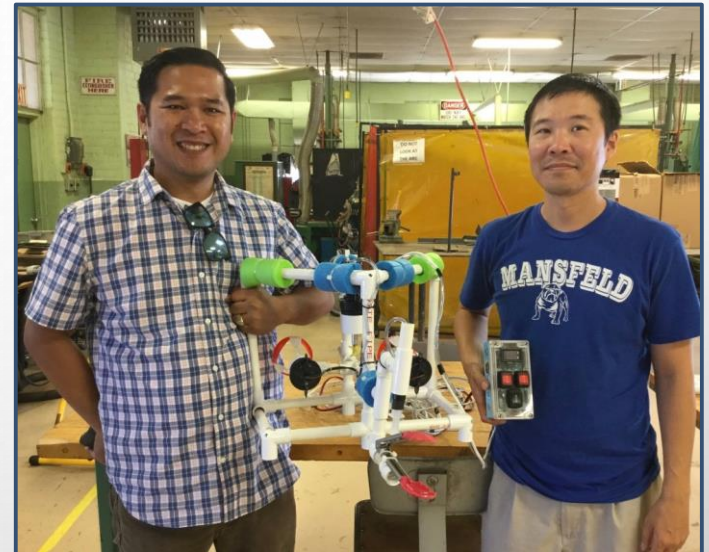
# DURING THE ACADEMY 20 TEACHERS

- GAINED AN UNDERSTANDING OF HOW REMOTELY OPERATED VEHICLES (ROVS) ARE USED IN THE WATER INDUSTRY
- INVESTIGATED CENTRAL ARIZONA PROJECT (CAP) OPERATIONS
- ENGAGED IN THE ENGINEERING DESIGN, BUILDING AND TESTING OF UNDERWATER ROVS
- DEVELOPED AN UNDERSTANDING OF BUOYANCY, HYDRODYNAMICS, FORCES, ENERGY, ELECTRICAL CIRCUITRY, WIRING, SOLDERING AND CONTROL SYSTEMS.

THEY ARE NOW IMPLEMENTING WITH THEIR STUDENTS!

# WHAT'S NEXT?

*"One of the best, if not the best professional development courses I have participated in. Not only will I be applying what I learned for my robotics club but I will also be improving some of my energy curriculum with it as well."*



*"This was by far one of the BEST PD things I have ever taken in 11 years of teaching! THANK YOU! I want to come back next summer and help out!"*

# ARIZONA MATE REGIONAL COMPETITION

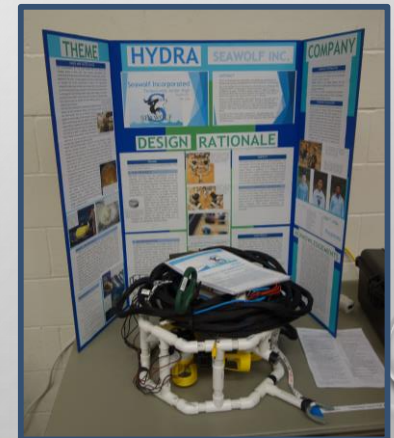


*Saturday April 27, 2019*

7:30 AM - 5:00 PM

University of Arizona

Volunteer: <http://bit.ly/2SXY2qn>





# DIRECT STUDENT OUTREACH



8 SWWL Festivals  
511 Students



23 3<sup>rd</sup> grade GW  
529 Students



3 Discovery Programs  
195 Students



16 – Middle School GW  
438 Students



2 – Bathroom Audits  
601,053 gal/day savings



# MARANA WATER FESTIVAL



**9 Schools**  
**18 classes**  
**470 Students**





Water Sampling  
Equipment has  
been checked out  
for use in 5  
classrooms with  
180 students.

## WATER SAMPLING EQUIPMENT



# CONTACT INFORMATION

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